REMARKS

This is a full and timely response to the non-final Office Action of August 6, 2003. Reexamination, reconsideration, and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this First Response, claims 1-14, 16, 17, and 19-37 are pending in this application. Claims 1-4, 7-14, 17, and 20-25 are directly amended herein, and claims 26-37 are newly added. Further, claims 15 and 18 are canceled without prejudice or disclaimer. It is believed that the foregoing amendments add no new matter to the present application.

Response to Double Patenting Rejections

Claims 1, 2, 6-8, 11, and 12 stand provisionally rejected in the Office Action under the judicially created doctrine of provisional obviousness-type double patenting as purportedly being unpatentable over claims 1, 7, 11, and 12 of copending Application No. 09/715,253 ("the '253 application"). Further, claims 3-5, 9, 10, 13, and 14 stand provisionally rejected in the Office Action under the judicially created doctrine of provisional obviousness-type double patenting as purportedly being unpatentable over claims 4, 7, and 9 of copending Application No. 09/715,335 ("the '335 application"). Applicants respectfully assert that a double patenting rejection based on a copending application is improper until such application issues into a patent. Thus, Applicants request that the instant application be allowed to issue, notwithstanding the '253 and '335 applications, once the instant application is otherwise within a condition for allowance pursuant to M.P.E.P. §822.01.

Response to Claim Objections

Claims 12 and 17 presently stand objected to for various alleged informalities. Applicants submit that such informalities have been corrected herein and respectfully request that the objections to claims 12 and 17 be withdrawn.

Response to §103 Rejections

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g.*, *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §103 as purportedly being obvious to *MacInnis* (U.S. Patent No. 6,573,905) in view of *Computer Wall II*, RGB Spectrum, Inc. Specifications, 950 Marina Village Parkway, Alameda, CA 94501, 9/2000, http://www.rgb.com/Webpages/prodpgs/cwall.html (hereinafter referred to as "*Computer Wall II*"). Claim 1, as amended, reads as follows:

> 1. A single logical screen (SLS) graphical display system, comprising:
> an interface configured to receive graphical data defining an image;
> a plurality of display devices; and
> a plurality of graphical acceleration units, each of said plurality of graphical acceleration units respectively interfaced with one of said plurality of display devices and configured to render a portion of said graphical data to said one display device such that said display devices display said image as a single logical screen, ***wherein at least one of said graphical acceleration units comprises:***
> ***a first graphical pipeline configured to receive and process a graphical command, said first graphical pipeline configured to render graphical data from said graphical command;***
> ***a second graphical pipeline configured to receive and process <u>said</u> graphical command***; and

a compositor interfaced with said first and second graphical pipelines and one of said display devices, wherein said graphical command defines an image to be displayed by said one display device interfaced with said compositor, and wherein said graphical data rendered by said first graphical pipeline entirely defines said image to be displayed by said one display device interfaced with said compositor. (Emphasis added).

Applicants respectfully assert that the alleged combination of *MacInnis* and *Computer Wall II* fails to suggest or teach at least the features of pending claim 1 highlighted hereinabove.

In this regard, it is alleged in the Office Action that *MacInnis* teaches:

"a plurality of graphical acceleration units... respectively interfaced with one of said plurality of displays... wherein at least one of said graphical acceleration units comprises: a first graphical pipeline configured to render graphical data (Figure 69, Column 112, lines 24-33); a second graphical pipeline configured to render graphical data (see above, Figure 69, Column 112, lines 24-33): second display means for displaying a second image based on said composited portion (*video pipeline*, Figure 4, Column 6, lines 53-60; Column 7, lines 4-10, 16-20); and a compositor configured to interface with said one display said graphical data rendered by said first and second graphical pipelines (see above; Figure 62, 69; Column 52, lines 18-19; Column 52, lines 19-23; Column 46, lines 1-7;)."

Even if it is assumed arguendo that the above Office Action assertions are true, Applicants respectfully assert that the alleged "first graphical pipeline" and the alleged "second graphical pipeline" do not appear to render graphical data from the ***same*** graphical command. In this regard, each of the alleged "pipelines" appears to render graphical data to be displayed in a different graphical window, as compared to the other alleged "pipelines." See Figure 61 and Column 112, lines 24-27. Thus, it appears that each of the alleged "pipelines" processes different graphical commands. Indeed, *MacInnis* specifically describes the alleged "pipelines" as being "independent" of one another. See Column 112, lines 24-27. Further, the cited art provides no motivation or reason for changing the design shown by *MacInnis* such that multiple ones of the alleged "pipelines" receive and process the same graphical command.

For at least the reasons set forth above, Applicants assert that the cited art fails to suggest a "graphical acceleration unit" comprising "a first graphical pipeline configured to

receive and process a graphical command... (and) to render graphical data from said graphical command" and "a second graphical pipeline configured to receive and process ***said*** graphical command," as described by pending claim 1. (Emphasis added). Thus, Applicants respectfully submit that the cited art fails to teach or suggest each of the features of claim 1, as amended, and the 35 U.S.C. §103 rejection of claim 1 should be withdrawn.

Claims 2-6, 16, 17, and 26-30

Claims 2-4 presently stand rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II.* Furthermore, claims 5, 6, and 16 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins* (U.S. Patent No. 6,111,582). In addition, claim 17 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* in further view of *Deering* (U.S. Patent No. 6,496,186) and *Dachille* (GI-Cube: An Architecture for Volumetric Global Illumination and Rendering, SIGGRAPH/ EUROGRAPHICS Workshop on Graphics Hardware, August 200, interlaken Switzerland, ACM Press, NY, NY, pages 119-128). Also, claims 26-30 have been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 2-6, 16, 17, and 26-30 contain all features of their respective independent claim 1. Since claim 1 should be allowed, as argued hereinabove, pending dependent claims 2-6, 16, 17, and 26-30 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 7

Claim 7 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. Claim 7, as amended, reads as follows:

> 7. A single logical screen (SLS) graphical display system, comprising:
>
> first rendering means for rendering graphical data from a first graphical command received by said first rendering means, said first rendering means including a plurality of pipeline means for rendering, in parallel, said graphical data from said first graphical command and a compositing means for compositing said graphical data rendered by said first plurality of pipeline means, ***each of said first plurality of pipeline means configured to render at least a portion of said graphical data from said first graphical command***;
>
> second rendering means for rendering graphical data from a second graphical command received by said second rendering means, said second rendering means including a plurality of pipeline means for rendering, in parallel, said graphical data from said second graphical command and a compositing means for compositing said graphical data rendered by said second plurality of pipeline means, ***each of said second plurality of pipeline means configured to render at least a portion of said graphical data from said second graphical command***;
>
> first display means for displaying a first image based on graphical data composited by said compositing means of said first rendering means; and
>
> second display means for displaying a second image based on graphical data composited by said compositing means of said second rendering means,
>
> wherein said first and second images define at least a portion of a single logical screen image. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants submit that the alleged combination fails to disclose at least the features of claim 7 highlighted hereinabove. Thus, the rejection of claim 7 under 35 U.S.C. §103 is improper and should be withdrawn.

Claims 8-10 and 31

Claims 8-10 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. Further, claim 31 has been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 8-10 and 31 contain all features of their respective independent claim 7. Since claim 7 should be allowed, as argued hereinabove, pending dependent claims 8-10 and 31 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 11

Claim 11 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. Claim 11, as amended, reads as follows:

> 11. A single logical screen (SLS) graphical display method, comprising:
> receiving graphical data defining an image;
> rendering different portions of said graphical data via different ones of a plurality of graphical acceleration units;
> in each of said graphical acceleration units, compositing the graphical data rendered by said each graphical acceleration unit; and
> displaying said image across a plurality of display devices as a single logical screen, said displayed image based on said composited graphical data,
> ***wherein said rendering comprises rendering, in one of said graphical acceleration units, graphical data from a single graphical command via each of a plurality of pipelines***. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants submit that the alleged combination fails to disclose at least the features of claim 11 highlighted hereinabove. Thus, the rejection of claim 11 under 35 U.S.C. §103 is improper and should be withdrawn.

Claims 12-14, 19, 20, and 32

Claims 12-14 and 19 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. Furthermore, Claim 20 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Deering* and *Dachille*. In addition, claim 32 has been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 12-14, 19, 20, and 32 contain all features of their respective independent claim 11. Since claim 11 should be allowed, as argued hereinabove, pending dependent claims 12-14, 19, 20, and 32 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 21

Claim 21 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. Claim 21, as amended, reads as follows:

> 21. A single logical screen (SLS) graphical display system, comprising:
> an interface configured to receive graphical data defining an image;
> a plurality of display devices; and
> a plurality of graphical acceleration units, each of said graphical acceleration units interfaced with a respective one of said plurality of display devices and configured to render, in parallel, a different portion of said graphical data such that said display devices display said image as a single logical screen, ***each of said graphical acceleration units comprising a plurality of graphical pipelines*** and a compositor, wherein one of said graphical acceleration units is configured to render at least a portion of a three-dimensional graphical object, ***each of the plurality of graphical pipelines of said one graphical acceleration unit configured to render, in parallel, at least a portion of said three-dimensional graphical object***, and wherein the compositor of said one graphical acceleration unit is configured to composite graphical data rendered by said plurality of graphical pipelines of said one graphical acceleration unit. (Emphasis added).

As set forth hereinabove in the arguments for allowance of pending claim 1, *MacInnis* appears to show multiple "pipelines" that independently render to different graphical windows. See Column 112, lines 24-40; Column 96, lines 55-63; and Figures 61 and 69. Therefore, it does not appear that two or more of the alleged "pipelines" of *MacInnis* render portions of the ***same*** graphical object. Accordingly, Applicants respectfully submit that the cited art fails to suggest at least the features of claim 21 highlighted hereinabove.

For at least the reasons set forth above, Applicants assert that the cited art fails to suggest each feature of pending claim 21. Thus, the rejection of claim 21 under 35 U.S.C. §103 is improper and should be withdrawn.

Claims 22-24, and 33-36

Claim 22 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Deering* and *Dachille*. Further, claims 23 and 24 presently stand rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. In addition, claims 33-36 have been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 22-24, and 33-36 contain all features of their respective independent claim 21. Since claim 21 should be allowed, as argued hereinabove, pending dependent claims 22-24, and 33-36 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 25

Claim 25 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Computer Wall II* and in further view of *Jenkins*. Claim 25, as amended, reads as follows:

> 25. A single logical screen (SLS) graphical display method, comprising:
> receiving ~~a~~ graphical data defining an image;
> displaying said image via a plurality of display devices as a single logical screen; and
> for each of said display devices, rendering in parallel a different portion of said graphical data and compositing said rendered portion,
> wherein said rendering comprises ***rendering, in parallel for a single one of said display devices, at least a portion of a three-dimensional graphical object via a plurality of graphical pipelines***. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 21, Applicants submit that the alleged combination fails to disclose at least the features of claim 25 highlighted hereinabove. Thus, the rejection of claim 25 under 35 U.S.C. §103 is improper and should be withdrawn.

Claim 36

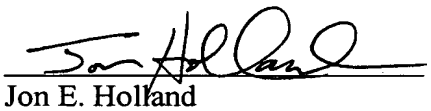
Claim 36 has been newly added via the amendments set forth herein. Applicants submit that the pending dependent claim 36 contains all features of its respective independent claim 25. Since claim 25 should be allowed, as argued hereinabove, pending dependent claim 36 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

By: 

Jon E. Holland
Reg. No. 41,077
(256) 704-3900 Ext. 103

Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400